



**The Army Materiel  
Command's  
Cost Management Plan  
for  
Ordnance**

**February 2001**

## Table of Contents

<b><u>SECTION I: DEFINE THE BUSINESS AREA</u></b>	<b>4</b>
1.01 DEFINITION	4
1.02 ORGANIZATIONAL STRUCTURE	4
1.03 ORGANIZATIONAL CHART	4
1.04 MISSION	4
1.05 AUTHORIZED STRENGTHS	5
1.06 DEPOT/PLANT/ARSENAL LOCATIONS	5
<b><u>SECTION II: COST MANAGEMENT ACTIVITIES - ARMY WORKLOAD AND PERFORMANCE SYSTEM (AWPS)</u></b>	<b>5</b>
2.01 INTRODUCTION	5
2.02 PERFORMANCE MEASUREMENT AND CONTROL (PMC) - COST	6
2.021 Critical Measures	6
2.022 Cost Objects	6
2.023 Data Analysis/Displays	6
2.03 PERFORMANCE MEASUREMENT & CONTROL-NEXT GENERATION (PMC-NG)	6
2.031 Next Generation	6
2.032 Features	7
2.04 SUMMARY	8
<b><u>SECTION III: FUTURE MODULES/ENHANCEMENTS</u></b>	<b>8</b>
3.01 BASOPS MODULE	9
3.011 Version 1.0	9
3.012 Version 2.0	9
3.013 Status	10
3.02 NOR MODULE	10
3.021 Reports	10
3.022 Forecast	11
3.023 Status	11
3.03 MATERIAL MODULE	11
3.031 Reports	11
3.032 Status	12
3.04 MANUFACTURING MODULE	12
<b><u>SECTION IV: SUMMARY</u></b>	<b>12</b>
<b><u>SECTION V: POINTS OF CONTACT</u></b>	<b>12</b>
5.01 ACTIVITY BASED COSTING/MANAGEMENT (ABC/M)	12
5.02 ARMY WORKLOADING AND PERFORMANCE SYSTEM (AWPS)	13
<b><u>APPENDIX A</u></b>	<b>14</b>
<b><u>APPENDIX B</u></b>	<b>15</b>
<b><u>APPENDIX C</u></b>	<b>16</b>
<b><u>APPENDIX D</u></b>	<b>17</b>
<b><u>APPENDIX E</u></b>	<b>18</b>

APPENDIX F.....	19
APPENDIX G.....	20
APPENDIX H.....	21
APPENDIX I.....	22
APPENDIX J.....	23
APPENDIX K.....	24
APPENDIX L – ACRONYMS.....	25

## **SECTION I: DEFINE THE BUSINESS AREA**

### **1.01 DEFINITION.**

This plan includes those arsenals / ammunition plants / depots in the Ordnance Army Working Capital Fund (AWCF). The installations included in this plan are Anniston Munitions Center (ANMC), Blue Grass Army Depot (BGAD), Crane Army Ammunition Activity (CAAA), Letterkenny Munitions Center (LEMC), McAlester Army Ammunition Plant (MCAAP), Pine Bluff Arsenal (PBA), Red River Munitions Center (RRMC), Rock Island Arsenal (RIA), Sierra Army Depot (SIAD), Tooele Army Depot (TEAD), and Watervliet Arsenal (WVA).

### **1.02 ORGANIZATIONAL STRUCTURE.**

A typical ammunition installation is structured as follows: commander, a civilian executive assistant with directorates for operations, maintenance, production, resource management, and information management.

### **1.03 ORGANIZATIONAL CHART.**

An organization chart for the AMC Ordnance business area is at Appendix A.

### **1.04 MISSION.**

This activity group manufactures, renovates, stores and demilitarizes ordnance materiel for all Services within the Department of Defense (DoD) and foreign military customers. The Operations Support Command (OSC) located at Rock Island, IL manages the Ordnance activities with the exception of Pine Bluff Arsenal. The Soldier and Biological Chemical Command (SBCCOM) manages Pine Bluff Arsenal. These activity groups provide the Army an organic industrial capability to produce quality munitions and large caliber weapons, while also providing the full range of ammunition maintenance for modern weapons for U.S. Military Services and allied Services. Army Ordnance activities manufacture, renovate, store and demilitarize materiel for all branches of DoD. The activities also provide ammunition logistics functions (i.e., receipts, issues, inventory, surveillance, maintenance and rewarehousing) for all U.S. Military Services. The Ordnance activities manufacture and sell 155MM howitzers, 120MM M256 gun tubes, 120MM smoke mortars, gun mounts for the M1A1 Abrams tank, grenades and smoke rounds, rebuilt gas masks, and tool sets and kits. Seven activities

provide base support for the installations they manage. Primary customers include the Army, other DoD Services, and Foreign Military Sales (FMS).

#### **1.05 AUTHORIZED STRENGTHS.**

The table at Appendix B provides the authorized end strength for FY01 for the Ordnance business area covered by this implementation plan.

#### **1.06 DEPOT/PLANT/ARSENAL LOCATIONS.**

See Appendix C. Anniston, Letterkenny, and Red River munitions centers belong to the Ordnance Activity Group and report through Blue Grass, Crane, and McAlester, respectively.

### **SECTION II: COST MANAGEMENT ACTIVITIES - ARMY WORKLOAD AND PERFORMANCE SYSTEM (AWPS).**

#### **2.01 INTRODUCTION.**

The Operations Support Command has recently installed the initial version of the AWPS to provide a modern automated tool with which to make better management decisions at ANMC, LEMC, RPMC, SIAD, TEAD, and BGAD, as well as CAAA and MCAAP. Installation is pending at PBA, RIA and WVA. Base operations support costs at the ordnance facilities will be included in this business area. Direct ammunition operations workload is planned by estimating the workhours required to perform each production run of items and/or an aggregation of work by mission/function. Upon implementing AWPS several benefits were realized. The system allows managers to review how work is programmed, executed and evaluated. It provides a vital management tool to installation Commanders and allows shop managers to plan and monitor performance against that plan. This has resulted in changes to workhour standards, work package aggregation, and performance measures. To fully use AWPS the work force will require some additional training in cost management methods, cost and performance strategy, and at the executive level, in AWPS software concepts and performance. Since AWPS contains the activities required to perform the assigned work and the hours required for each activity, the personnel requirements are also determined at the work center level and summed through the total installation level. The AWPS compares work force requirements to the workload. Each employee builds a record in AWPS that establishes the activities performed in the past by that employee and the total number of

hours devoted to each. This will assist supervisors in determining if sufficient personnel skills are available for upcoming assignments.

## **2.02 PERFORMANCE MEASUREMENT AND CONTROL (PMC) - COST.**

### **2.021 Critical Measures.**

The AWPS displays several crucial measures concerning the performance of ammunition operations: the number of workhours that are required to do the assigned work (have more or less workhours been consumed than planned for the work); a comparison of the number of workhours that have been consumed to the number of hours planned for the work actually performed to date (indication of the extent to which the work is ahead of or behind schedule); and the number of people who are needed to accomplish the assigned work. This information is available to every planner and shop supervisor.

### **2.022 Cost Objects.**

The cost objects (workload activities/functions) in the ammunition operations mission are normally items maintained, e.g., bomb, rounds of ammunition, demilitarization, shipping, receiving, surveillance, or care of supplies in storage. These cost objects can be further aggregated for management analysis to mission group as shown at Appendix D.

### **2.023 Data Analysis/Displays.**

Cost data displayed in this fashion provides management information that can be acted upon to improve performance in areas critical to the mission. Color-coding indicates areas most needing management attention. Mission functions within the supply installation operations group can be rank ordered by cost variance. See Appendix E. The same type of information is available by work center to give a picture of aggregate work center performance. A work center may work dozens of items simultaneously. Performance at the division, directorate, and total installation is similarly aggregated and reported. Graphical representation of the performance of a work order at Red River Munitions Center follows for illustration at Appendix F. The AWPS chart at Appendix G provides an example of the type of analysis that can be performed using AWPS.

## **2.03 PERFORMANCE MEASUREMENT & CONTROL-NEXT GENERATION (PMC-NG).**

### **2.031 Next Generation.**

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The PMC system was developed to assist Army depot managers in controlling cost and schedules on various army projects. The system was designed around multi-tiered displays of cost and schedule variances with a graphic view of historic data points. The former PMC system was developed in FoxPro and ran in the MS-DOS operation system with a Banyan Vines network. The next generation software will migrate this system into an open architecture relational database with a Windows 3.11 / Windows 95/98 / Windows NT / Windows 2000 compatible Graphical User Interface (GUI). (See Appendix H, milestone dates) The goal is to create an environment that will allow anyone to create a system by defining business rules and combining data elements. The system will be based on a few simple screens that will be applied at various levels of management. Default screen reports and graphs will be developed as a guiding framework, but no one will be limited in the ability to create their own interesting world.

## 2.032 Features.

- a. The PMC-NG will calculate and store historic and future data elements at the lowest level per depot.
- b. The PMC-NG system will consist of several levels of management. Levels of management refer to various summary rollups of the master data. The number of levels possible is only limited by the number of combinations of data elements stored in the master tables.
- c. There are several instances when managers need to know trends based on a combination of projects. The PMC-NG will allow the user to click-and-pick the projects to assign for rollup reference.
- d. Enhanced on-line help capabilities. The data dictionary will be incorporated into the online help with a graphic interface for viewing tables and columns with definitions.
- e. Users will have the ability to format and save as a personal default, various categories of projects that will be stored in the user's default screen.
- f. All tabular screens in PMC-NG will contain the following functions:
  - 1) The Adhoc capability will allow user's to report columns, sort order, and filters. Therefore the user will have defaults for all screen types.
  - 2) Filter commands can be saved and stored for future use.
  - 3) Other users can copy formats previously saved by another user.

- 4) User defined drill-downs, so the user can go right to projects he is responsible for.
- 5) Increased Search capability.
- 6) Increased Graphics capability.
- 7) The Graph function will allow the user to display any of the historically saved data in a graphic format. The values will be plotted either in cumulative or in resources-per-day (RPD).
- 8) Graphic reports can be printed or saved in several formats including links to email and word docs.
- 9) The user defined graphic formats can be saved and selected as user defaults in the same manner as all tabular adhoc screens.
- 10) The Print function will allow the user to print any tabular or graphic report.
- 11) Ability to save any tabular listing in a local data file.
- 12) Ability to sort any table screen in any combination of selected columns.
- 13) Allows the user to select filter criteria to display data.
- 14) The utilities toolbar allows the user to directly link to the Filer Manager, Email, MS-Word, and MS-Notepad.

#### **2.04 SUMMARY.**

The implementation of this tool to track labor cost expenditures is a significant tool that has already proven its usefulness. Installation managers have ready access to information about the installation's performance at the level of display of directorate, mission group, mission function, Procurement Request Order Number (PRON), and work center; thus knowing where problems are occurring and where to focus special attention and corrective actions.

#### **SECTION III: FUTURE MODULES/ENHANCEMENTS.**

AWPS future enhancements are in progress to provide additional cost visibility and forecasting capabilities for the total cost of a work order. Several enhancements are being developed to provide a total cost picture at an installation. These tools will allow analysis of cost drivers/outputs at discrete levels so that management improvements can be applied to reduce costs. A milestone schedule is at Appendix H.



### **3.01 BASOPS MODULE.**

The development and extension of AWPS into the Base Operations (BASOPS) support mission provides the installation with a total picture of depot personnel and associated workhours and costs. The initial BASOPS prototype version 1.0 was developed at the prototype site, Anniston Army Depot (ANAD). Version 1.0 provides an initial capability of AWPS to look at Mission Group and Mission Function information as defined by the Army Management Structure Code (AMSCO). Version 2.0 will provide further capability to define performance measures within the BASOPS mission and track progress against those measures.

#### **3.011 Version 1.0.**

The AWPS BASOPS prototype provides the capability for Army installations to track budget, schedule, and expense information. Version 1.0 was successfully prototyped at Anniston Army Depot. It will be deployed to ammunition installations and other installations to extend all the benefits currently experienced in direct mission operations. The last remaining portion of the software to be installed is the indirect support to the ammunition operations. This will complete the AWPS data set at the ammunition facilities. This AWPS capability is in the early planning stages. Upon completion, the full set of AWPS capabilities will apply to direct mission, indirect support to mission, and BASOPS, thereby accounting for all of the work done by every installation employee.

#### **3.012 Version 2.0.**

The AWPS BASOPS Version 2.0 will include the more detailed display of Performance Measurement and Control (PMC) graphs by Operation Code (OPCODE) and related performance measures. Version 2.0 will also include a crosswalk of labor expenditures to Service Based Costing (SBC) codes.

#### **3.0121 Performance Measures.**

BASOPS performance measures are being developed that will be standardized across all installations. Initial testing and review of the integrated prototype includes installation workload, labor hour, and performance information at the Operations Code (OPCODE) level of detail. An OPCODE is a five-digit (alphanumeric) code that identifies the work being performed. Cost will be captured at this lowest level by work center and can be rolled up to higher levels.

3.0122 SBC Relationship.

AWPS is being developed to accommodate the display of data by Service Based Costing (SBC) categories. SBC is used to present a financial snapshot once a year at the installation level. The SBC methodology divides the financial world into 95 service categories. (See Appendix I) Each SBC corresponds to a primary and secondary pacing measure. The pacing measures are used to generally represent the demand for each service category.

3.013 Status.

AWPS-BASOPS Version 1.0 is completed for the five maintenance installations and will be rolled out to the OSC ordnance installations in FY01/02. Timelines for Version 2.0 may slip due to A-76 studies being conducted at installations. A prototype site is expected to occur in June 2002, with Initial Operating Capability at all sites expected to occur in June 2003.

3.02 NOR MODULE.

The Net Operating Result (NOR) modeling and reporting capability will provide the installations and higher command level managers with the ability to assess the financial health of the installations on a timely basis within the current fiscal year and the out-years. The NOR capability will allow users to track and project the financial performance of the installation in maintaining a profit neutral position, as mandated by Army Working Capital Fund requirements. See Appendix J. The NOR module will make maximum use of the Standard Industrial Fund System (SIFS) module of the Standard Depot System (SDS) database system, the primary system used to collect and report AWPS data. This module will track NOR data elements from SIFS output reports to SDS source data elements. This will enable developers to write the software necessary to acquire the data from these sources and display the data within the NOR module of Army Workload and Performance System (AWPS). The use of a preprocessor may be required to capture, within the AWPS NOR module, all applicable financial data since some financial data resides outside of the SDS/SIFS data environment.

3.021 Reports.

The Weekly/Monthly NOR addresses the installations desire to increase the accuracy and timeliness of NOR data. Using the weekly NOR calculation process, installations can achieve an approximate weekly NOR to the PRON level. Through the calculation of variances this approximation can be refined and rolled up to the Mission level. A monthly NOR estimate at the

mission level can be derived by performing the same calculations on the last day of the current month. A more definitive installation level display of NOR will be available from the monthly 1307 DFAS process. It will include automatic adjustments required in the re-valuation of inventory and other cost adjustments equal to the initial NOR input data the installations send to AMC and DFAS at the end of each month.

### **3.022 Forecast.**

The NOR forecast capability is intended to provide the installations with a means to develop revenue projections through the end of the fiscal year and into the next fiscal year. This data, along with expense data, new order data, and direct labor hour data, will provide NOR projections for this timeframe.

### **3.023 Status.**

The requirement for a NOR capability that is integrated with AWPS had been validated and documented with the maintenance installations and their senior commands. A detailed functional design has been prepared and reviewed by both prospective users and assigned software and systems developers. Detailed software design efforts have recently been completed and software development efforts are commencing. A prototype capability at a pilot installation is expected to be ready in March 2002. Initial Operating Capability at all sites is expected by December 2002. These dates do not include manufacturing implementation. (See Appendix H)

## **3.03 MATERIAL MODULE.**

The Material Module for AWPS is intended to expand and enhance installation and headquarters cost managers' ability to assess the spectrum of installation workload and work-force related costs in a timely manner on a weekly basis. This module is an extension of AWPS and will provide users material cost visibility through an installation-dedicated ORACLE database. (See Appendix K)

### **3.031 Reports.**

The Material Module will add further capability to AWPS by providing the cost and use of material needed to maintain or repair Army items. AWPS captures workload and workforce data by extracting data from existing Standard Depot System (SDS), Automated Time and Attendance Production System (ATAAPS), and

Standard Industrial Fund System (SIFS) module of SDS. As envisioned, the Material Module will also derive its data from these same standard Army systems using SDS and SIFS. It will additionally extract data from the Army Materiel Command Installation Supply System (AMCISS). Together these systems will contribute data to AWPS for generating weekly reports that complement the workload and work force data currently produced. The Material Module will allow managers to have a closer link between the availability of workers, skills, and material required to perform the work. The addition of the material cost module will improve the Army's present system for budgeting and managing material costs at the maintenance installations.

### **3.032 Status.**

The Material Module will be integrated with the existing AWPS PMC Exec views of labor. The AWPS Material Module will allow users to view direct material costs against a PCN. A prototype site will be selected in June 2002 with Initial Operating Capability at all sites by March 2003. (See Appendix H)

### **3.04 MANUFACTURING MODULE.**

Implementing a manufacturing module is currently awaiting installation of an Enterprise Resource Planning (ERP) system at Rock Island Arsenal (RIA). Following implementation of the ERP system at RIA, AWPS will be deployed to the remaining OSC manufacturing site, Watervliet Arsenal. A schedule for WVA is To Be Determined (TBD). (See Appendix H)

## **SECTION IV: SUMMARY.**

The existing and evolving AWPS, delineated above, will produce a near-term system of sufficient capability and sophistication that will satisfy the requirements of effective cost management at the Ordnance Working Capital Fund installations. Whether these tools remain in AWPS or are integrated into Logistics Modernization (LOGMOD) efforts, they will provide sufficient detail to lead to continuous process improvement.

## **SECTION V: POINTS OF CONTACT**

### **5.01 ACTIVITY BASED COSTING/MANAGEMENT (ABC/M).**

793-6538, Comm. 309-782-6538

HQ OSC, AMSOS-CA, DSN

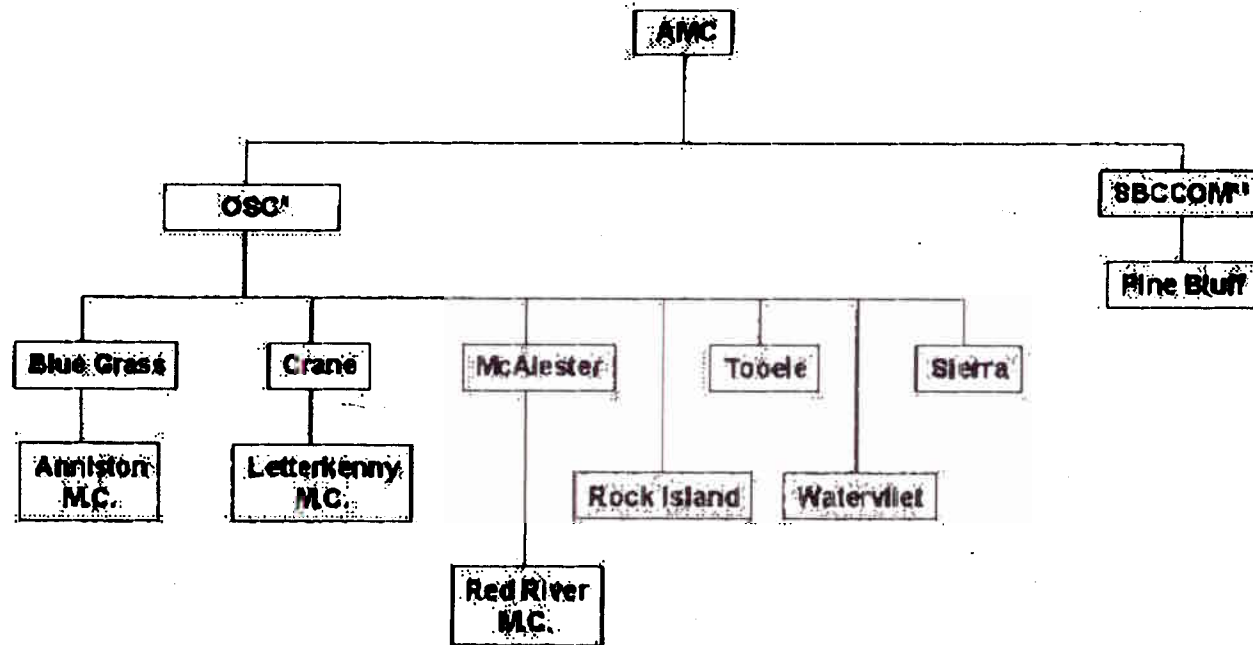
5.02 ARMY WORKLOADING AND PERFORMANCE SYSTEM (AWPS).

AWPS Program Director, HQ OSC, SOSMA-ISA, DSN  
793-7089, Comm. 309-782-7089

5.03 The Headquarters AMC Cost Management/ABC point of contact.

DSN: 767-8030, Comm. 703-617-8030

# Ordinance Associated with AWCF



- \* Commander: MG Wade H. McManus
- \*\* Commander: MG John C. Doesburg

Fax: 1-800-510-0041 Mar 21 01 9:17 P.00

**FY01 AUTHORIZED END STRENGTH**

<u>OSC</u>	<u>CIVILIAN</u>	<u>MILITARY</u>
Blue Grass (Inc ANMC)	539	2
Crane (Inc LEMC)	755	1
McAlester (Incl RPMC)	954	2
Rock Island Arsenal	1150	7
Sierra	582	1
Tooele	465	2
Watervliet	521	1

<u>SBCCOM</u>	<u>CIVILIAN</u>	<u>MILITARY</u>
Pine Bluff Arsenal	890	4

## APPENDIX C

Anniston, Letterkenny, and Red River Munitions Centers belong to the Ordnance Activity Groups and report through Blue Grass, Crane, and McAlester, respectively. The depot/plant/arsenal locations are:

Blue Grass Army Depot (BGAD), Richmond, KY

Crane Army Ammunition Activity (CAAA), Crane, IN

Pine Bluff Arsenal (PBA), Pine Bluff, AR

Sierra Army Depot (SIAD), Herlong, CA

Tooele Army Depot (TEAD), Tooele, UT

McAlester Army Ammunition Plant (MCAAP), McAlester, OK

Rock Island Arsenal (RIA), Rock Island, IL

Watervliet Arsenal (WVA), Watervliet, NY



# APPENDIX D

AWPS

Mission: **AMMO** Command: **BQAO** SR: **BQAO** Type: **MO**

STANDARD TERMINOLOGY

Subgroup	Project Title	BAC	BCWS	BCWP	ACWP	CV	SV	PEC	Date
AMMAINT	AMMAINT	1009710	601502	0	24422	-24422	-401502	0	12/01
SDO	SDO	12140252	1732011	11275109	11275109	0	40200	100310/1	12/01
TOTAL	TOTAL	10544322	4807350	1020777	4712211	-781500	-554502	22118704	12/01

PMC provides reports and graphs in man-hours or in dollars. Industry standard earned value terminology uses cost notation. PMC extends the standard cost definitions to include quantity. Mission Group identifies abroad functional area such as displayed above i.e. SDO (Standard Depot Operations). Other example are Demil, Maint, and Surveillance. Mission Groups can be further broken down into Mission Functions.

Industry Standard Terminology (Measured in Dollars)		PMC Extended Terminology (Measures in Man hours)	
Acronym	Description	Acronym	Description
BAC	Budget At Completion	QAC	Quantity At Completion
BCWS	Budgeted Cost of Work Scheduled	BQWS	Budgeted Quantity of Work Scheduled
BCWP	Budgeted Cost of Work Performed	BQWP	Budgeted Quantity of Work Performed
ACWP	Actual Cost of Work Performed	AQWP	Actual Quantity of Work Performed
PEC	Predicted End Cost	PEQ	Predicted End Quantity

BAC/QAC = BUDGET. This value may be more clearly understood as the total allotment of either man-hours or dollars that may be expended on a work grouping.

BCWS/BQWS = SCHEDULE. Quantity or Cost expressed as a time phased percentage of the total allowance in man-hours or dollars allotted for a work grouping. This value represents your target Schedule as determined by information from SDS.

BCWP/BQWP = PROGRESS. An expression of production counts from the labor reporting systems as an aggregate cost in either man-hours or dollars. It is a reflection of where a production shop thinks it is in relation to the target schedule.

ACWP/AQWP = CHARGES. The actual Quantity in man-hours or expended Cost of work performed. These values are actual expenditures derived from reported charges.

Cost Variance CV - The value of progress performance to date (Yellow Line) minus the actual charges or expenditures to date (Green Line). A negative value is indicative of the Charge line being above the progress line (exceeding projected cost), an unfavorable condition.

Schedule Variance SV - The value of progress performance to date (Yellow Line) minus the "to date" value as determined by the Schedule (Blue Line). A negative value of SV is indicative of the Schedule line above the Progress line (Behind production schedule), an unfavorable condition.

# APPENDIX E

AWPS Applications - Microsoft Internet Explorer

**AWPS** HELP HOME

Mission: **AMMO** Command: **BGAD** Site: **BGAD** [Back](#)

[Display](#) [Add Data](#) [Edit](#) [Print](#)  contains

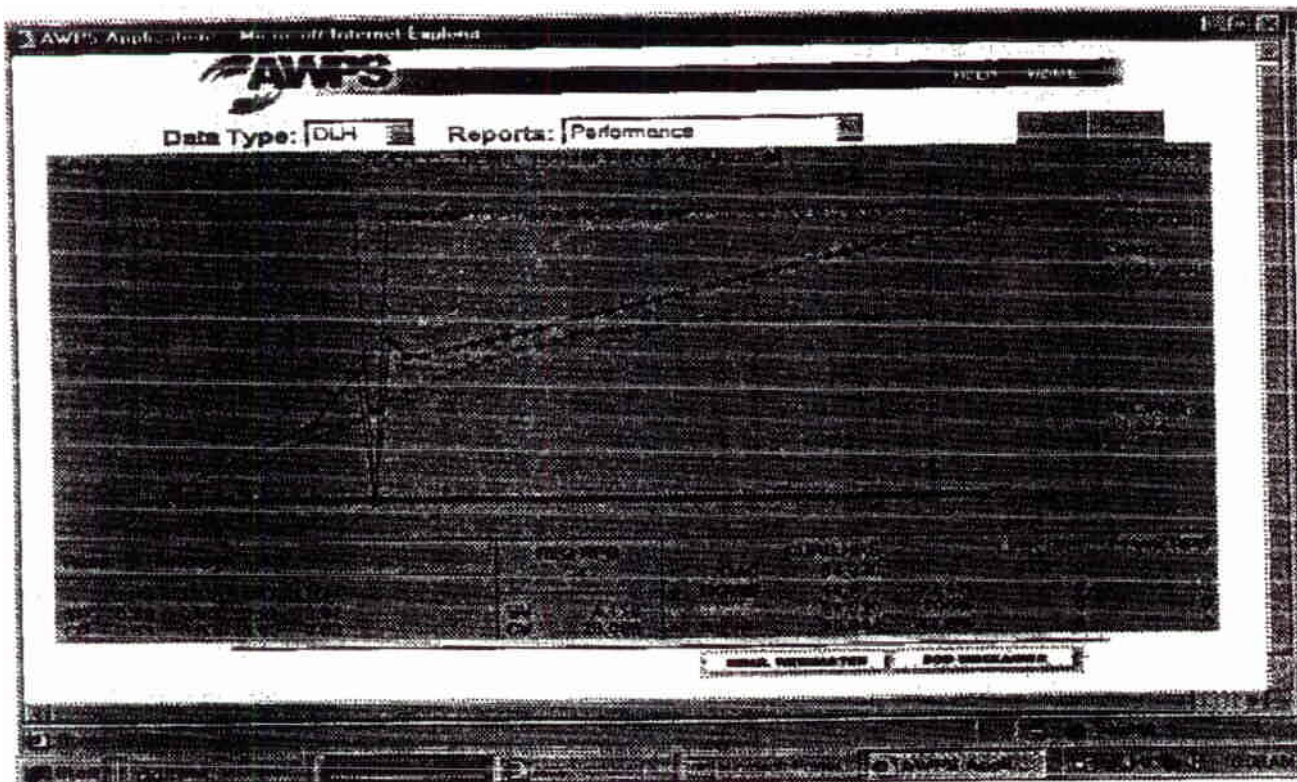
Mission Group	Mission Function	Project Title	BAC	BCWS	BCWP	ACWP	CV	SV	PEC	Date
SDO	COSIS	COSIS	23000	23000	0	12085	-12085	-23000	0	12/01
SDO	RCV	RCV	5731311	488132	465496	357436	108060	-22636	4400846	12/01
SDO	S/R	S/R	355832	102979	129661	104660	25001	26682	287220	12/01
SDO	TOTAL	TOTAL	12108357	1785811	4831211	1527289	283922	46200	1803107	12/01

[ERROR MESSAGE](#) [ADD EXPLANER](#)

Mission Functions identify specific work performed, (e.g., shipping, receiving, inventory)



## APPENDIX F



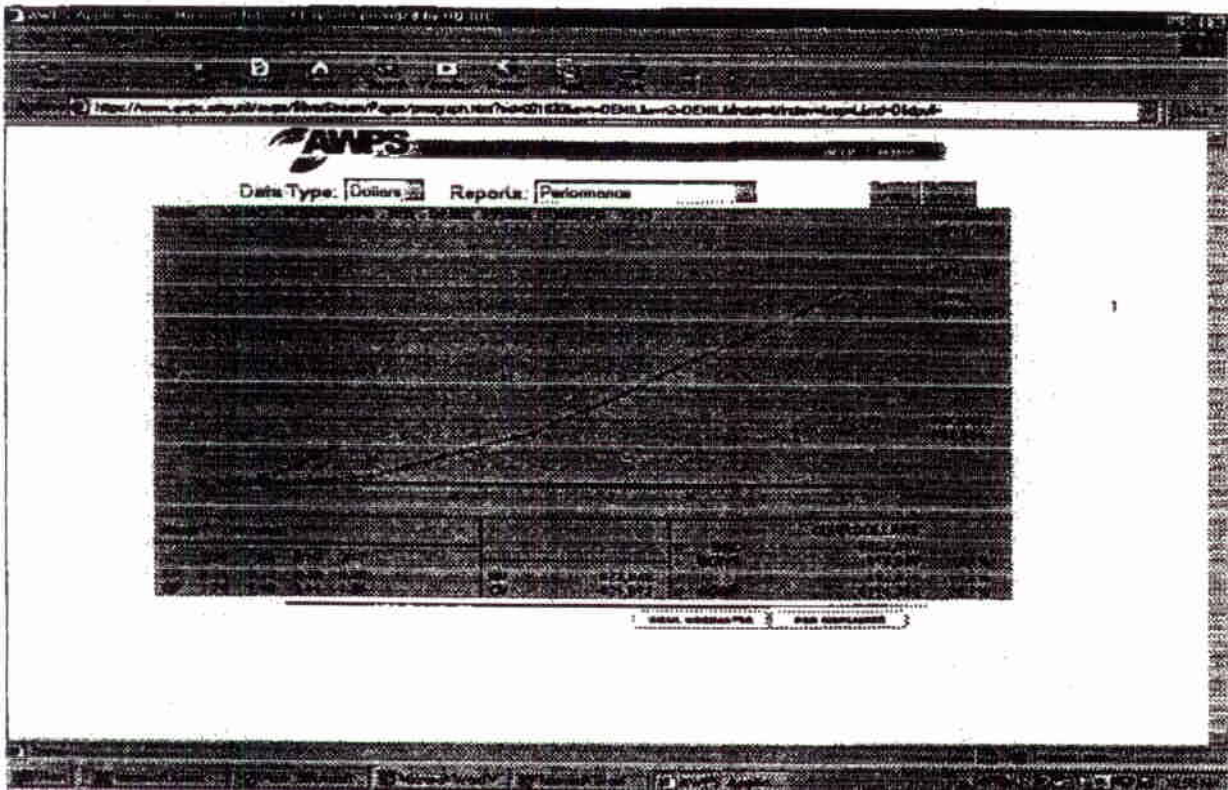
Analysis: The schedule is uniform throughout the year and production has exceeded the scheduled quantity. The green line which represents cost clearly show the program to be well managed and under cost. This is an excellent example of a well-managed program that was executed within the established budget.

AWPS Application - Microsoft Internet Explorer  
 Data Type: DLH Reports: Performance  
 CURHRS = Current Hours, LWKHRS = Last Week Hours, LWKRPD = Last Week Resource Per Day

*CURHRS = Current Hours, LWKHRS = Last Week Hours,  
 LWKRPD = Last Week Resource Per Day*

There are six types of graphic reports in AWPS-PMC for Ammunition: workhours, Dollars, Expenditures/Progress, Comparisons, Indicators, and Bar Charts.

## APPENDIX G



The total programmed cost of workhours on this work order for the demilitarization of 155MM rounds is \$552,510. To date, the value of the work done in terms of cost of labor is \$92,576. The value of the workhours scheduled to date is \$18,936 and the workhours expended to date are \$114,388. These numbers are rolled up from the individual dollar requirements and charges of labor hours to do the entire job. The AWPS projects that the effort will be completed for \$682,690, as a result of a cost overrun for labor. Much more detailed information is available at the installation, to include the names of all individuals charging to the program and hours charged each pay period by activity. Similar graphs are available for each work order, work center, division, directorate, and total installation level in AWPS. In this way performance may be analyzed in a variety of aggregations down to and including the individual work order. Further, every workhour charged is visible in AWPS so that monitoring of manpower application is facilitated; and analysis at very discrete levels is then possible.

## Appendix H

### AWPS Milestone Dates - Ordnance

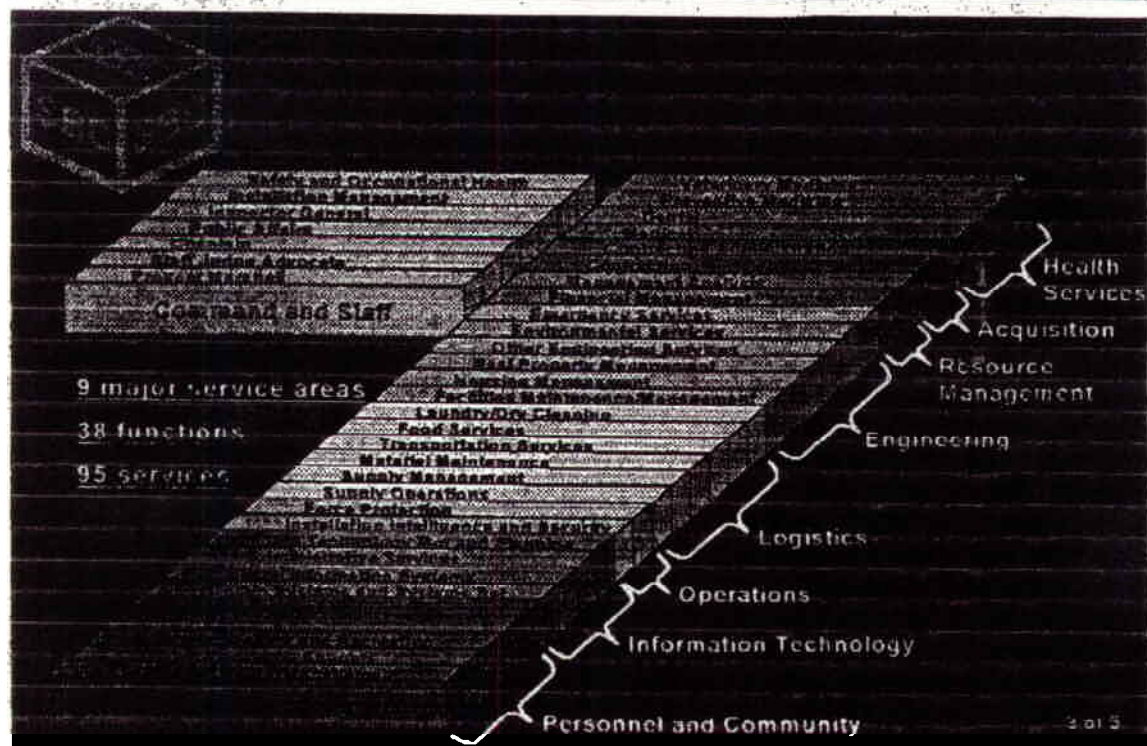
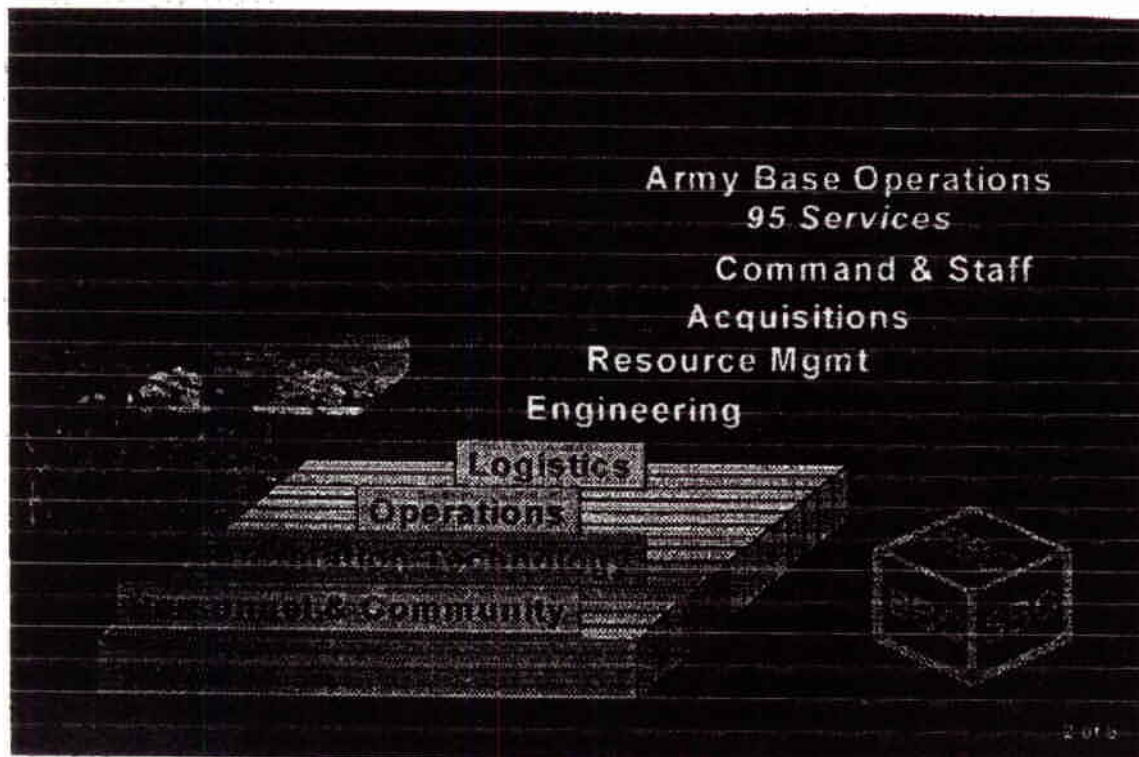
Module	Design Specification	Prototype 1 Site	Deploy All Sites	Initial Operating Capability
Ammo AWPS	=====	=====	=====	Nov 2000
Next Generation AWPS-Ammo	Dec 2001	Mar 2002	Oct 2002	Dec 2002
NOR-Ammo	Jul 2001	Nov 2001	Jun 2002	Sep 2002*
BASOPS-Ammo	Dec 2001	Jun 2002	Dec 2002	Jun 2003*
Indirect-ammo	Dec 2001	Jun 2002	Dec 2002	Jun 2003*
Material's-Ammo	Dec 2001	Jun 2002	Dec 2002	Mar 2003*
Manufacturing -RIA	Jan 2002	Aug 2002	=====	Aug 2002
Mfg-PBA	Dec 2002	Jul 2003	=====	Jul 2003
Mfg-WVA	Mar 2003	Oct 2003	=====	Oct 2003

Note: Since a lot of the dates are into the future, specific OSC site locations and dates have not yet been scheduled, but will fall within the timeframes above.

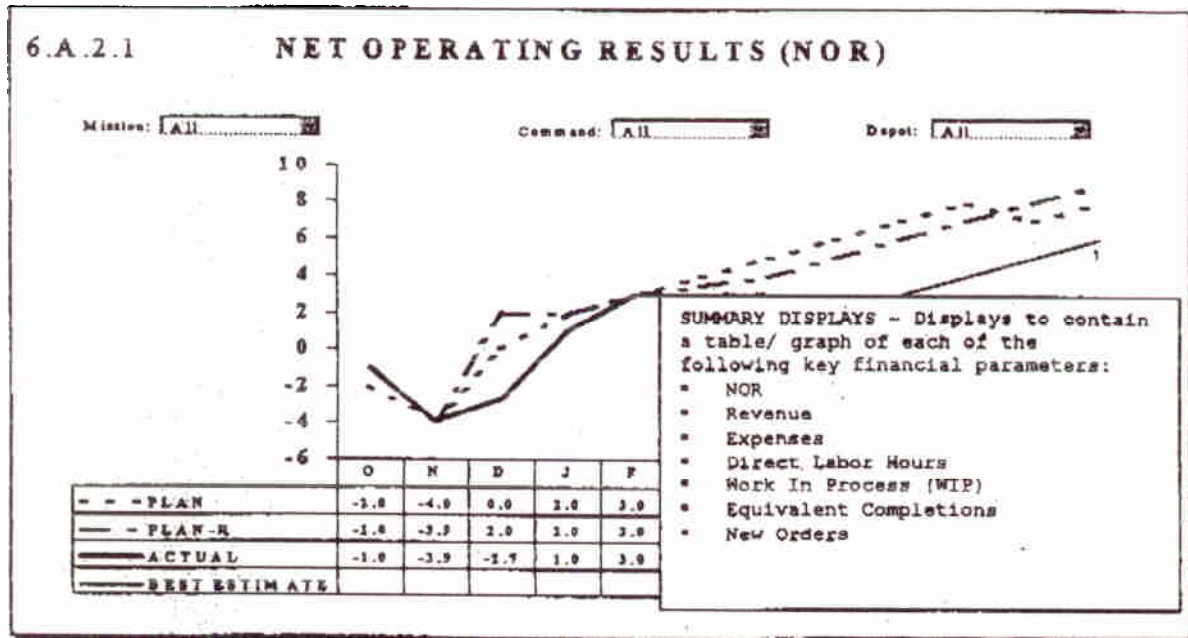
\* These dates exclude the arsenals. To include the arsenals then add approximately 1 year past the arsenal dates.



# APPENDIX I



## APPENDIX J



### KEY BENEFITS

- Timely availability of an estimated NOR on a weekly basis.
- Display of initial monthly NOR input.
- Display of official NOR from DFAS 1307.
- Availability of forecasts of key financial data within the fiscal year.
- Capture of key financial parameters within one system.

Installation requirements obtained from site visits yielded the following proposed NOR capabilities:

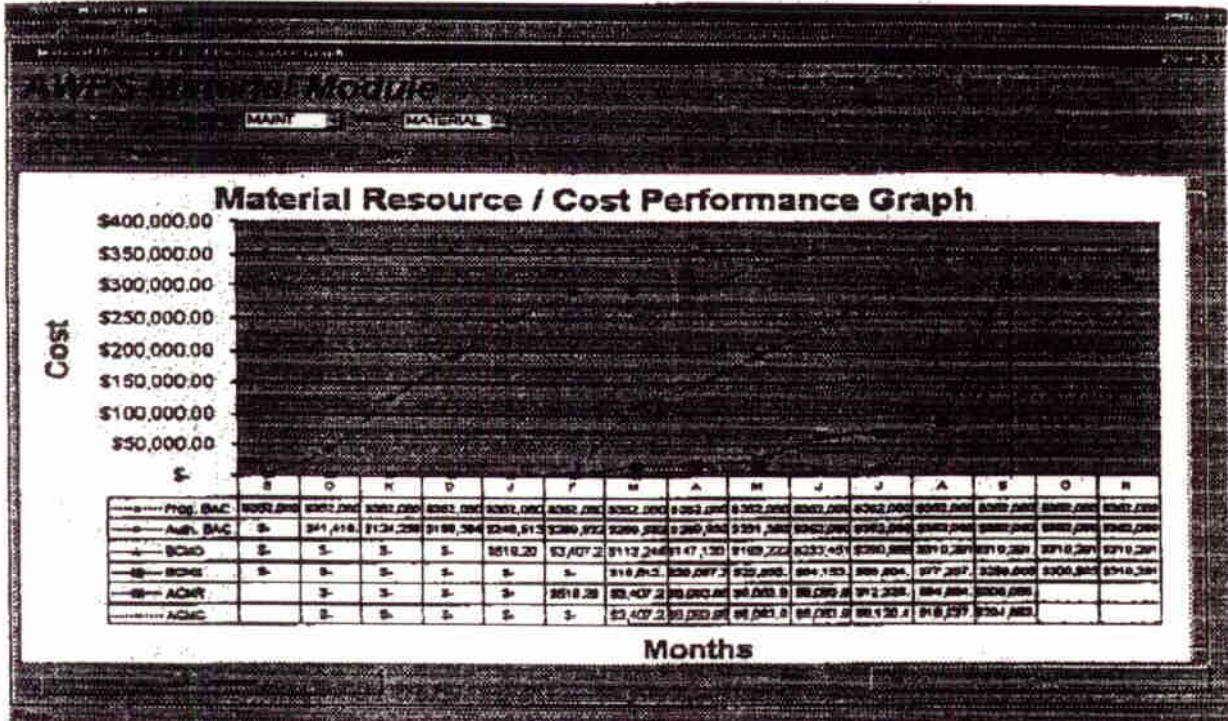
### WEEKLY/MONTHLY NOR

- Weekly NOR estimates provide managers with NOR trend.
- Installation input of monthly 1307 NOR will provide greater level of NOR accuracy.
- Official NOR from DFAS 1307 will record NOR for historical trend.
- NOR data elements are cumulative year to date and month to date.

### FORECASTED NOR

- NOR forecasted on a monthly basis.
- NOR forecasted to the PRON level.
- Forecasts shown on a cumulative basis.
- Forecasts to be based on a four-week trend analysis.
- Will include carry-in revenue to support display of forecasted financials within the fiscal year.

## APPENDIX K



Five basic algorithms support the presentation of material cost data. These algorithms identify the Budget at Completion (BAC), Budgeted Cost of Material Scheduled (BCMS), Budgeted Cost of Material Ordered (BCMO), Actual Cost of Material Received (ACMR), and the Actual Cost of Material Consumed (ACMC) in the production process. All terms are expressed in dollars.

- BAC represents the allotment of material cost to be expended on a work grouping over time. It will be represented in two ways, one for the Programmed BAC and one for the Authorized BAC. It is represented as a solid red line, fully funded; or a broken red line, partially authorized.
- BCMS is a time-phased schedule of material costs incurred for a work grouping. It should equal BAC before the program ends. It is a blue line.
- BCMO represents the total cost of material requisitioned through AMCISS, contract, and fabrication based on work center needs. It is a purple line.
- ACMR is the total value of material received at a specific work center where material is applied / installed / affixed to an end item. Material is expected to have been received by the work center need date. It is a brown line.
- ACMC represents the total cost of material consumed at a work center that applies/installs/affixes material to an end item. A green line represents this cost.

The results of the preceding data assessments are portrayed in a PMC earned value chart similar in design and concept to that used to depict labor resources and performance. Specific variance measures accompany the above algorithms. These are schedule variance (SV), backorder variance (BV), and cost variance (CV).



## APPENDIX L - ACRONYMS

ACMC	Actual Cost of Material Consumed
ACMR	Actual Cost of Material Received
ACWP	Actual Cost of Work Performed
AMC	Army Materiel Command
AMCISS	Army Materiel Command Installation Supply System
AMSCO	Army Management Structure Code
ANAD	Anniston Army Depot
ANMC	Anniston Munitions Center
AQWP	Actual Quantity of Work Performed
ATAAPS	Automated Time Attendance and Production System
ANCF	Army Working Capital Fund
AWPS	Army Workload and Performance System
BAC	Budget at Completion
BASOPS	Base Operations
BCMO	Budgeted Cost of Material Ordered
BCMS	Budgeted Cost of Material Scheduled
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Scheduled
BGAD	Blue Grass Army Depot
BQWP	Budgeted Quantity of Work Performed
BQWS	Budgeted Quantity of Work Scheduled
BV	Backorder Variance
CAAA	Crane Army Ammunition Activity
CV	Cost Variance
DFAS	Defense Finance and Accounting Service
DoD	Department of Defense
ERP	Enterprise Resource Planning
FMS	Foreign Military Sales

GUI Graphical User Interface  
 LEMC Letterkenny Munitions Center  
 LOGMOD Logistics Modernization  
 MCAAP McAlester Army Ammunition Plant  
 NOR Net Operating Result  
 OPCODE Operation Code  
 OSC Operations Support Command  
 PBA Pine Bluff Arsenal  
 PCN Program Control Number  
 PEC Predicted End Cost  
 PEQ Predicted End Quantity  
 PMC Performance Measurement and Control  
 PMC-NG Performance Measurement and Control - Next Generation  
 PRON Procurement Request Order Number  
 QAC Quantity at Completion  
 RIA Rock Island Arsenal  
 RPD Resources-Per-Day  
 RPMC Red River Munitions Center  
 SBC Service Based Costing  
 SBCCOM Soldier & Biological Chemical Command  
 SDS Standard Depot System  
 SIAD Sierra Army Depot  
 SIFS Standard Industrial Fund System  
 SV Schedule Variance  
 TEAD Tooele Army Depot  
 WVA Watervliet Arsenal

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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: The Army Materiel Command's Cost Management Plan for Ordnance

1. Reference memorandum, HQDA, DALO-AMA, 19 January 2000, subject: Cost Management or Activity-Based Costing (ABC).
2. The purpose of this memorandum is to request your review and comments on USAMC's Cost Management Plan for Ordnance, enclosed. Submission of this plan was requested through reference memorandum. Coordination with Assistant Secretary of the Army (Financial Management and Comptroller), SAFM-BUR and SAFM-CA, is being done by separate memorandum.
3. Please provide response to 703-696-3095, or by 30 Mar 01.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

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Director of Program  
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